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EXAMINER	
LINDSEY, MATTHEW S	

ART UNIT	PAPER NUMBER
2451	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/711,699	MOMTCHILOV ET AL.	
	Examiner	Art Unit	
	MATTHEW S. LINDSEY	2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-14,19-32,34,40 and 44-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9, 11-14, 19-32, 34, 40 and 44-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-9, 11-14, 19-32, 34, 40 and 44-46 are pending in this application. Claims 1, 14, 19, 25, 32, 34, 40, 44 and 46 are amended and Claims 10, 15-18, 33, 35-39, 41-43 and 47-48 are cancelled as filed on 4 June 2009.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 June 2009 has been entered.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 19-24 and 44-45 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. With respect to Claims 19-24 and 44-45, they are directed to a system but lack the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 USC 101. They are not a series of steps or acts to be a process, nor

are they a combination of chemical compounds to be a composition of matter. As such they fail to fall within a statutory category.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 11-13, 19-20, 25, 27-28 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison (US 2004/0128412 A1) in view of Kasasaku (US 7,464,133 B1).

8. With respect to Claim 1, Harrison disclosed: "A method for synchronizing data on a device in communication with a client system ([0077], lines 1-5), said method comprising:

receiving, by a control virtual driver executing on a server (Fig. 5, object 506, where the host PC is the server), an event notification that a device is in communication with a client system ([0062], lines 1-14, where the driver 506 is on the host PC, or server and a client system or remote device is in communication with a peripheral device) via a USB connection ([0053], lines 6-9, where a device may be attached via a USB port)",

"mapping, by a driver mapping module executing on the server and responsive to receipt of the notification, the device into a user session hosted by the server (Fig. 8 and [0077], where the PDA 800, or device, connected to remote device 102, or client system, is mapped into a user session for synchronization application 504 running on the host PC, or server by the translation module 502 also running on the host PC, or server) communicating with said client system via a presentation-level protocol ([0034], Lines 1-4, where RDP, or remote desktop protocol is a presentation level protocol)", and

"executing, by said server within the user session, an instance of an application ([0021], lines 1-6); and

synchronizing, by a synchronization application, a collection of data on said device with a collection of data accessible from said user session as a result of the execution of said application instance ([0080], lines 1-8)".

Harrison did not explicitly state: "binding, by a redirector virtual driver executing on the server, the event notification to a port number associated with a virtual communication channel to generate binding information associated with the device" or "the server communicating with said client via the port referenced in the binding information".

However, Kasasaku disclosed: "binding, by a redirector virtual driver executing on the server, the event notification to a port number associated with a virtual communication channel to generate binding information associated with the device (Fig. 10 and Col. 9, lines 11-16, where the virtual port on the server binds the devices to

virtual communication channels based on received events, see Col. 4, lines 28-31, where the virtual port receives events from the device handler of the client)", and

"the server communicating with said client via the port referenced in the binding information (Col. 9, lines 11-16, where the virtual ports are used to distinguish the physical ports such that communication can occur)".

One of ordinary skill in the art would have been motivated to combine the references because both references disclose systems for a device connected to a local computer (client) to be controlled by a driver on a remote computer (server).

Therefore, it would have been obvious to modify the peripheral device connection system of Harrison with the teachings of Kasasaku to include support for binding the device to a port associated with a virtual communication channel for use in communication with the device. Motivation to combine these references comes from a server being able to distinguish between multiple clients and multiple peripheral devices connected to the clients. Therefore, by assigning a port to each device, the server can communicate with each peripheral device separately.

9. With respect to Claim 19, Harrison disclosed: "A system for synchronizing data on a device in communication with a client system ([0077], lines 1-5), the system comprising:

a client system ([0038], lines 1-3, the remote device) executing a presentation-level protocol ([0034], Lines 1-4, where RDP, or remote desktop protocol is a presentation level protocol) to communicate with a server system ([0030], lines 1-2, the

host PC), said client system including an event manager (Fig. 4, where the remote device includes a device adaptor box) to generate event notifications based on a communication received from a device ([0054], lines 1-11, where a device adapter box receives signals or events from the peripheral device and sends these to the network) interfacing with said client system ([0041], lines 1-2, the peripheral device and [0024], lines 1-4, where a peripheral device is physically attached to a remote device);

the device communicating with said client system ([0024], lines 1-4), and having a collection of data ([0077], lines 1-3, where the PDA or peripheral device has a collection of data, or a calendar);

a control virtual driver executing on the server system to receive the event notifications ([0062], lines 1-14, where the driver 506 is on the host PC, or server and a client system or remote device is in communication with a peripheral device)", and

"the server system communicating with said client system via a presentation-level protocol ([0034], Lines 1-4, where RDP, or remote desktop protocol is a presentation level protocol), and hosting at least one user session executing an instance of an application ([0021], lines 1-6) used to synchronization the collection of data on said device with a collection of data accessible from said user session ([0080], lines 1-8)".

Harrison did not explicitly state: "a redirector virtual driver executing on the server system to bind the event notifications to a port number associated with a virtual communication channel to generate binding information associated with the device"

However, Kasasaku disclosed: "a redirector virtual driver executing on the server system to bind the event notification to a port number associated with a virtual communication channel to generate binding information associated with the device (Fig. 10 and Col. 9, lines 11-16, where the virtual port on the server binds the devices to virtual communication channels based on received events, see Col. 4, lines 28-31, where the virtual port receives events from the device handler of the client)".

One of ordinary skill in the art would have been motivated to combine the references because both references disclose systems for a device connected to a local computer (client) to be controlled by a driver on a remote computer (server).

Therefore, it would have been obvious to modify the peripheral device connection system of Harrison with the teachings of Kasasaku to include support for binding the device to a port associated with a virtual communication channel for use in communication with the device. Motivation to combine these references comes from a server being able to distinguish between multiple clients and multiple peripheral devices connected to the clients. Therefore, by assigning a port to each device, the server can communicate with each peripheral device separately.

10. With respect to Claim 25, Harrison disclosed: "A computer-readable program medium having instructions executable by a processor ([0017], lines 1-6) to synchronizing data on devices communicating with a client system with data on a server ([0077], lines 1-5), the computer readable medium comprising:

instructions for receiving, by a control virtual driver executing on a server (Fig. 5, object 506, where the host PC is the server), an event notification that a device is in communication with a client system ([0062], lines 1-14, where the driver 506 is on the host PC, or server and a client system or remote device is in communication with a peripheral device) via a USB connection ([0053], lines 6-9, where a device may be attached via a USB port)",

"instructions for mapping, by a driver mapping module executing on the server and responsive to receipt of the notification, the device into a user session hosted by the server (Fig. 8 and [0077], where the PDA 800, or device, connected to remote device 102, or client system, is mapped into a user session for synchronization application 504 running on the host PC, or server by the translation module 502 also running on the host PC, or server) communicating with said client system via a presentation-level protocol ([0034], Lines 1-4, where RDP, or remote desktop protocol is a presentation level protocol)", and

"instructions for executing, by said server within the user session, an instance of an application ([0021], lines 1-6); and

Instructions for synchronizing, by a synchronization application, a collection of data on said device with a collection of data accessible from said user session as a result of the execution of said application instance ([0080], lines 1-8)".

Harrison did not explicitly state: "instructions for binding, by a redirector virtual driver executing on the server, the event notification to a port number associated with a

virtual communication channel to generate binding information associated with the device" or "the server communicating with said client via the port referenced in the binding information".

However, Kasasaku disclosed: "binding, by a redirector virtual driver executing on the server, the event notification to a port number associated with a virtual communication channel to generate binding information associated with the device (Fig. 10 and Col. 9, lines 11-16, where the virtual port on the server binds the devices to virtual communication channels based on received events, see Col. 4, lines 28-31, where the virtual port receives events from the device handler of the client)", and

"the server communicating with said client via the port referenced in the binding information (Col. 9, lines 11-16, where the virtual ports are used to distinguish the physical ports such that communication can occur)".

One of ordinary skill in the art would have been motivated to combine the references because both references disclose systems for a device connected to a local computer (client) to be controlled by a driver on a remote computer (server).

Therefore, it would have been obvious to modify the peripheral device connection system of Harrison with the teachings of Kasasaku to include support for binding the device to a port associated with a virtual communication channel for use in communication with the device. Motivation to combine these references comes from a server being able to distinguish between multiple clients and multiple peripheral devices connected to the clients. Therefore, by assigning a port to each device, the server can communicate with each peripheral device separately.

11. With respect to Claim 2, the combination of Harrison and Kasasaku disclosed: "The method of claim 1 wherein mapping the device further comprises mapping a device communicating with the client system via a WI-FI communication protocol (Harrison, [0024], lines 12-16, where connectivity between a remote device and a peripheral device may be through a wireless network)".

12. With respect to Claims 3 and 27 the combination of Harrison and Kasasaku disclosed: "wherein mapping the device further comprises a device communicating with the client system via an IR serial communication protocol (Harrison, [0081], lines 2-5)".

13. With respect to Claims 4 and 28, the combination of Harrison and Kasasaku disclosed: "wherein said device in communicates with the client system using a Bluetooth serial communication protocol (Harrison, [0081], lines 2-5)".

14. With respect to Claim 11, the combination of Harrison and Kasasaku disclosed: "The method of claim 1 wherein the client system is a proxy client (Harrison, [0024], lines 1-4, where the remote device, or client system, acts as a proxy between the peripheral device and host PC)".

15. With respect to Claim 12, the combination of Harrison and Kasasaku disclosed: "The method of claim 11 wherein the proxy client is hosted on the same server

supporting the user session (Harrison, [0021], lines 1-3, where the host PC hosts the applications and user session of the remote device)".

16. With respect to Claim 13, the combination of Harrison and Kasasaku disclosed: "The method of claim 11 wherein the proxy client is hosted on a different server than the server supporting the user session (Harrison, [0024], lines 1-5, where a remote device or client proxy acts as a host server to the peripheral device and as a client proxy to between the host PC, which is the server supporting the user session, see [0021], lines 1-3)".

17. With respect to Claim 44, the combination of Harrison and Kasasaku disclosed: "The system of claim 19, wherein the device interfaces with the client system via a USB connection (Harrison, [0053], lines 6-9)".

18. With respect to Claim 20 and 45, the combination of Harrison and Kasasaku disclosed: "wherein said event manager is a Plug and Play event manager and said event notification is a Plug and Play event notification (Harrison, [0053], lines 6-9, where USB devices are plug and play, and therefore the event manager is a plug and play event manager and the notification is a plug and play event notification)".

19. With respect to Claim 46, the combination of Harrison and Kasasaku disclosed: "The method of claim 1, further comprising: intercepting at least one device enumeration

method in a session hosted by the server (Kasasaku, Fig. 10 and Col. 9, lines 11-16, where a device enumeration method is assigning virtual port numbers to the device), said enumeration method enumerating at least one device communicating with the client (Harrison, [0024], lines 1-4)".

The motivation to combine is the same as above in Claim 1.

20. Claims 5 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison and Kasasku in view of Wright (US 7,024,501 B1).

21. With respect to Claims 5 and 26 the combination of Harrison and Kasasaku did not explicitly state: "wherein said device communicates with the client system using a wireless USB/ultra-wideband wireless communication protocol".

However, Wright disclosed: "wherein said device in communication with the client system communicates using a wireless USB/ultra-wideband wireless communication protocol (Col. 2, line 56 – Col. 3, line 5, where a wireless device such as a PDA is in wireless communication with a controller, and this can be a USB system and Col. 6, lines 11-13 where ultra wideband can also be used)"

One of ordinary skill in the art at the time of the invention would have been motivated to combine the references because they disclosed teachings of connecting a device to a computer system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the peripheral device connection system of Harrison and

Kasasaku with the teachings of Wright to include support for wireless USB/ultra-wideband. Motivation to combine these references comes from the advantages presented by using wireless communications rather than wired, such as ease of configuration and reconfiguration, due to the elimination of the need to physically add, remove, or displace a physical medium; space that would ordinarily be used for device interconnection media may be given to other uses; and device mobility is increased. Therefore by combining the references, one can increase device mobility by using wireless connections.

22. Claims 6, 9, 21-22, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison and Kasasaku in view of North (US 7,325,026 B1).

23. With respect to Claim 6, the combination of Harrison and Kasasaku disclosed: "The method of claim 1 further comprising: synchronizing a collection of data on said device with a collection of data accessible from said user session as a result of the execution of said application instance (Harrison, [0080], lines 1-8)".

The combination of Harrison and Kasasaku did not explicitly state: "that uses socket communication for inter-process communications; and hooking a socket call within the user session".

However, North disclosed: "that uses socket communication for inter-process communications (Col. 2, lines 9-12); and hooking a socket call within the user session (Col. 2, lines 9-12)".

One of ordinary skill in the art at the time would have been motivated to combine the references because they disclosed teachings related to network communication between devices on the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

24. With respect to Claim 9, the combination of Harrison and Kasasaku disclosed: "The method of claim 1 further comprising: synchronizing a collection of data on said device with a collection of data accessible from said user session as a result of the execution of an application (Harrison, [0080], lines 1-8)".

The combination of Harrison and Kasasaku did not explicitly state: "that uses socket communication for inter-process communications; and hooking a socket call on the server".

However, North disclosed: "that uses socket communication for inter-process communications (Col. 2, lines 9-12); and hooking a socket call on the server (Col. 2, lines 9-12)".

One of ordinary skill in the art at the time would have been motivated to combine the references because they disclosed teachings related to network communication between devices on the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls on a server. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication

monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

25. With respect to Claim 21, the combination of Harrison and Kasasaku disclosed: "The system of claim 19 further comprising: the application instance synchronizing the collection of data on the client with the collection of data accessible from the server (Harrison, [0080], lines 1-8)".

The combination of Harrison and Kasasaku did not explicitly state: "an application instance using socket communication for inter-process communications", or "by allowing the server to hook a socket call made by the application instance".

However, North disclosed: "an application instance using socket communication for inter-process communications (Col. 2, lines 9-12)" and "by allowing the server to hook a socket call made by the application instance (Col. 2, lines 9-12)".

One of ordinary skill in the art at the time would have been motivated to combine the references because they disclosed teachings related to network communication between devices on the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

26. With respect to Claim 22, the combination of Harrison, Kasasaku and North disclosed: "The system of claim 21 wherein the socket call is hooked within the user session (North, Col. 2, lines 9-12)".

The motivation to combine is the same as above in claim 21.

27. With respect to Claim 29, the combination of Harrison and Kasasaku disclosed: "instructions for synchronizing a collection of data on said device with a collection of data accessible to the user session (Harrison, [0080], lines 1-8)".

The combination of Harrison and Kasasaku did not explicitly state: "include instructions for executing an instance of an application using socket communication for inter-process communications", or "for hooking a socket call within the session".

However, North disclosed: "include instructions for executing an instance of an application using socket communication for inter-process communications (Col. 2, lines 9-12)", and "for hooking a socket call within the session (Col. 2, lines 9-12)".

One of ordinary skill in the art at the time would have been motivated to combine the references because they disclosed teachings related to network communication between devices on the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One

embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

28. With respect to Claim 32, the combination of Harrison and Kasasaku did not explicitly state: "wherein said application instance uses socket communication for inter-process communications and the computer readable medium further comprises: instructions for hooking a socket call on the server console".

However, North disclosed: "wherein said application instance uses socket communication for inter-process communications (Col. 2, lines 9-12) and the computer readable medium further comprises: instructions for hooking a socket call on the server console (Col. 2, lines 9-12)".

One of ordinary skill in the art at the time would have been motivated to combine the references because they disclosed teachings related to network communication between devices on the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to

combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

29. Claims 7-8, 23-24 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison, Kasasaku and North in view of Jones (US 7,051,108 B1).

30. With respect to Claims 7, 23 and 30, the combination of Harrison, Kasasaku and North did not explicitly state: "wherein said hooking is virtual loop-back address hooking".

However, Jones disclosed: "wherein said hooking is virtual loop-back address hooking (Col. 2, lines 44-50, where a hook is used to intercept local, or loopback, communications before they are sent to the network)".

One of ordinary skill in the art at the time of the invention would have been motivated to combine the references because they disclosed teachings related to network communications between a server and client system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Harrison, Kasasaku and North with the teachings of Jones to include support for virtual loop back address hooking. Motivation to combine these comes from Jones, where "An advantage of this approach is that the connection oriented protocol is bypassed for data transfer only when connection oriented protocol is not necessary, namely when the connection is local. However, if the connection is not local, a conventional socket connection is formed. Thus, performance for local connections is greatly improved without having to rewrite applications to use sockets that do not use connection oriented protocol, such as UNIX-domain sockets. In addition, local and network clients are supported by the invention." (Col. 2, lines 56-65). Therefore by combining the references, the overhead associated with using a connection oriented protocol is bypassed for local connections where it is unnecessary, thus improving local transfer performance.

31. With respect to Claims 8, 24 and 31, the combination of Harrison, Kasasaku and North did not explicitly state: "wherein said hooking is virtual IP address hooking".

However, Jones disclosed: "wherein said hooking is virtual IP address hooking (Col. 2, lines 44-50, where a hook is used to intercept local communications, local

communications being on a virtual IP address since there is no physical interface associated with the local address)".

One of ordinary skill in the art at the time of the invention would have been motivated to combine the references because they disclosed teachings related to network communications between a server and client system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Harrison, Kasasaku and North with the teachings of Jones to include support for virtual address hooking. Motivation to combine these comes from Jones, where "An advantage of this approach is that the connection oriented protocol is bypassed for data transfer only when connection oriented protocol is not necessary, namely when the connection is local. However, if the connection is not local, a conventional socket connection is formed. Thus, performance for local connections is greatly improved without having to rewrite applications to use sockets that do not use connection oriented protocol, such as UNIX-domain sockets. In addition, local and network clients are supported by the invention." (Col. 2, lines 56-65). Therefore by combining the references, the overhead associated with using a connection oriented protocol is bypassed for local connections where it is unnecessary, thus improving local transfer performance.

32. Claims 14, 34 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison and Kasasaku in view of Ruberg (US 6,895,588 B1).

33. With respect to Claim 14, the combination of Harrison and Kasasaku did not explicitly state: "further comprising: determining the identity of the device in communication with said client system; and determining that the device is a member of a registered device class".

However, Ruberg disclosed: "further comprising: determining the identity of the device in communication with said client system (Col. 9, lines 29-40, specifically serial number, which identifies the device in communication with the client); and determining that the device is a member of a registered device class (Col. 9, lines 29-40, specifically device class)".

One of ordinary skill in the art at the time of the invention would have been motivated to combine the references because they disclose systems for a device connected to a local computer (client) to be controlled by a driver on a remote computer (server).

Therefore, it would have been obvious to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of Ruberg to include support for identifying the device and determining if the device is a member of a device class. Motivation to combine these references comes from identifying the device such that a driver can utilize the device. A device must be identified in order to utilize the correct driver to interact with the device, so therefore, by combining the references one can identify the device and utilize the proper driver for interaction with the device.

34. With respect to Claim 34, the combination of Harrison and Kasasaku disclosed: "The computer-readable medium of claim 25, further comprising: the device in communication with the client system via a USB connection ([0053], lines 6-9, where a device may be attached via a USB port), said client system communicating with a server using a presentation-level protocol ([0034], lines 1-4, where RDP, or remote desktop protocol is a presentation level protocol)".

The combination of Harrison and Kasasaku did not explicitly state: "instructions for determining the identity of the device in communication with said client system; and instructions for determining that the device is a member of a registered device class".

However, Ruberg disclosed: "instructions for determining the identity of the device in communication with said client system (Col. 9, lines 29-40, specifically serial number, which identifies the device in communication with the client); and instructions for determining that the device is a member of a registered device class (Col. 9, lines 29-40, specifically device class)".

One of ordinary skill in the art at the time of the invention would have been motivated to combine the references because they disclose systems for a device connected to a local computer (client) to be controlled by a driver on a remote computer (server).

Therefore, it would have been obvious to modify the peripheral device connection system of Harrison and Kasasaku with the teachings of Ruberg to include support for identifying the device and determining if the device is a member of a device class.

Motivation to combine these references comes from identifying the device such that a driver can utilize the device. A device must be identified in order to utilize the correct driver to interact with the device, so therefore, by combining the references one can identify the device and utilize the proper driver for interaction with the device.

35. With respect to Claim 40, the combination of Harrison, Kasasaku and Ruberg disclosed: "The method of claim 14, wherein the device communicates with the client system via a USB connection (Harrison, [0053], lines 6-9)".

Response to Arguments

36. Applicant's arguments with respect to claims 1-9, 11-14, 19-32, 34, 40 and 44-46, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW S. LINDSEY whose telephone number is (571)270-3811. The examiner can normally be reached on Mon-Thurs 7-5, Fridays 7-12.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

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MSL
6/18/2009

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2451